

AMENDMENTS TO THE CLAIMS

1-20. (Cancelled)

21. (Currently Amended) A method of manufacturing a plasma display panel (PDP) comprising a process of forming a metal oxide film made from magnesium oxide onto a substrate of the plasma display panel, the process of forming the metal oxide film comprising:

controlling a degree of vacuum and a partial pressure of a predetermined gas in a deposition room within a certain range;

introducing oxygen gas into the deposition room and controlling a partial pressure of the oxygen gas within a range from 3×10^{-3} Pa to 3×10^{-2} Pa, so as to suppress oxygen deficiency in the metal oxide film; and

introducing another ~~at least one~~ gas to increase oxygen deficiency in the metal oxide film, the another gas including at least one gas selected from the group consisting of ~~oxygen~~, water vapor, hydrogen, carbon monoxide, and carbon dioxide into the deposition room;

wherein when the another gas includes water vapor, controlling a partial pressure of the water vapor within a range from 1×10^{-4} Pa to 1×10^{-3} Pa,

wherein when the another gas includes hydrogen, controlling a partial pressure of the hydrogen within a range from 1×10^{-3} Pa to 5×10^{-2} Pa,

wherein when the another gas includes carbon monoxide, controlling a partial pressure of the carbon monoxide within a range from 1×10^{-3} Pa to 5×10^{-2} Pa, and

wherein when the another gas includes carbon dioxide, controlling a partial pressure of the carbon dioxide within a range from 1×10^{-4} Pa to 3×10^{-3} Pa.

~~and~~

~~controlling a partial pressure of the gas introduced into the deposition room within a certain range for controlling an amount of oxygen deficiency in the metal oxide film within a given range.~~

22 - 26. (Cancelled)

27. (Currently Amended) An apparatus for manufacturing a plasma display panel (PDP) for forming a metal oxide film onto a substrate of the PDP, said apparatus comprising:

a deposition room;

a gas-introducing means for introducing at least one of a first gas containing oxygen gas to suppress oxygen deficiency in the metal oxide film and a second gas at least one gas to increase oxygen deficiency in the metal oxide film, the second gas including at least one gas selected from the group consisting of oxygen, water vapor, hydrogen, carbon monoxide, and carbon dioxide into the deposition room;

an exhausting means for exhausting the deposition room;

a partial-pressure detecting means for detecting a partial pressure of the at least one of the first gas and the second gas in the deposition room;

a degree of vacuum detecting means for detecting a degree of vacuum in the deposition room; and

a control means for controlling an amount of the at least one of the first gas and the second gas to be introduced into the deposition room and an amount of evacuation from the deposition room based on information supplied from the partial-pressure detecting means and information supplied from the degree of vacuum detecting means such that the partial pressure of the at least one of the first gas and the second gas and the degree of vacuum in the deposition room can fall within a given range.

28. (New) An apparatus for manufacturing a plasma display panel (PDP) according to claim 27, wherein the gas-introducing means for introducing at least one of the first gas and the second gas includes introducing the first gas and the second gas into the deposition room; and

the control means for controlling the amount of the at least one of the first gas and the second gas includes controlling the first gas and the second gas to be introduced into the deposition room such that the partial pressure of each of the first and second gasses can fall within a given range.